

Appl. No. 09/869,532
Amdt. dated Aug. 13, 2003
Reply to Office action of Feb. 13, 2003

Amendments to the Specification:

Replace the "Title" paragraph on page 1 with the following amended paragraph:

Title of the Invention: Method for manufacturing coated products-

Insert the following headings on page 1 before paragraph 1:

CROSS REFERENCE TO RELATED APPLICATIONS (not applicable)

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH FOR DEVELOPMENT (not applicable)

INCORPORATION BY REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (not applicable)

BACKGROUND OF THE INVENTION

(1) Field of the Invention

Insert the following heading on page 1, after line 20:

BRIEF SUMMARY OF THE INVENTION

Replace the paragraph on page 1 beginning at line 21 with the following amended paragraph:

The object of the invention is to provide a method of the type described in the preamble, in which the drawbacks mentioned are avoided while the advantages thereof are retained.

To that end, a method according to the present invention is characterized by the features of claim 1. In the practice of the invention, coating is applied having a surface tension which is approximately equal to or preferably lower than the surface tension of a portion of the mass employed. In practice, a first coating is applied to a portion of the base product after which a second coating is applied over at least a portion of the first coating such that at least part of the product is covered by the first and second coating and a portion of the product is covered by the first or second coating only.

Replace the paragraph on page 1 beginning at line 25 through page 2, line 15 with the following amended paragraph:

Surprisingly, it has been found that the properties of a product manufactured by such method have improved considerably over the known products. Without wishing to be linked up to any theory, it is assumed that this effect is realized in that a better flow of the coating over the basic product part to be coated is effected in that the angle of contact between drops of coating and the surface of the base product is reduced due to the relevant surface tensions. As a result, the drops of coating will flow more effectively, in particular flow together more effectively to form a film layer, and moreover exhibit a better bonding to the mass of the base product. Thus, there is obtained on the relevant part of the base

product a film layer of coating exhibiting a particularly good bonding and a particularly good internal connection, ~~so that a closed coating is obtained and maintained having particularly good properties.~~ Thus, with a method according to the present invention, a product can be obtained having a closed coating which is, for instance, vapor proof and flexible, which can follow deformations of the product, for instance at pivoting parts or during expansion, shrinkage or compression of the product, and which moreover retains these properties for a long time.

Replace the paragraph on page 4 beginning at line 1 with the following amended paragraph:

In a further, particularly advantageous embodiment, a method according to the invention is characterized by the features of claim 8. In this case, the product is formed which upon exiting the molding die has a surface tension within the range of 30-44 dyne/c and a coating is applied to at least a portion of the surface, the coating being water based and having a surface tension within the range of from 40-27 dyne/cm.

Replace the paragraph on page 6 beginning at line 3 with the following amended paragraph:

Advantageous coatings are, inter alia, based on the polymers represented in claims 12 and 13. Thus, the first coating may be chosen from

among at least one member of the group comprising
melamine, acrylic binders, water-resistant
lacquers, cellulose
lacquers, cellulose acetate propionates,
polyethylene,
polyacrylates, synthetic polymers, natural
polymers,
synthetic waxes, natural waxes, polyactic acid,
derivatives or combinations thereof. The second
coating
may be chosen from among at least one member of
the group comprising acrylic binders, latices,
styrene-butadiene latex, polyvinyl alcohol,
polyvinyl acetate, polyacrylates, polyethylene
glycol, polyactic acid, synthetic polymers,
natural polymers, natural waxes, synthetic waxes
such as ionic polyethylene waxes and combinations
thereof.

Replace the paragraph on page 6 beginning at line 5 with the following amended paragraph:

An alternative embodiment of a method according to the present invention for obtaining products with product parts having different properties is characterized by the features of claim 17. In this embodiment, at least one
coating is used which
increases the water vapor proofness of the
product.

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Replace the paragraph on page 6 beginning at line 23 with the following amended paragraph:

In an alternative embodiment, a method according to the present invention is characterized by the features of claim 26. In this embodiment, the product has at least one receiving cavity which is at least partially filled with a fluid coating and subsequently emptied so that a film of coating remains on at least a portion of the wall of the receiving cavity.

Replace the paragraph on page 7 beginning at line 3 with the following amended paragraph:

The invention further relates to a method according to claim 27. In this embodiment, at least a part of the base product is provided with an agent which influences the properties of the relevant product part prior to the application of the coating to the relevant product part.

Replace the paragraph on page 7 beginning at line 14 with the following amended paragraph:

In a further alternative embodiment, a method according to the invention is characterized by the features of claim 30. In this embodiment, a coating is used which comprises an agent which influences the properties of the base product in the form of at least a softener.

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Replace the paragraph on page 7 at line 19 with the following amended paragraph:

The invention further relates to a method according to claim 33. In this embodiment, a coating is used in which a surface tension reducing agent is employed, the reducing agent providing a reduction of the surface tension of the coating layer after drying.

Through the provision of an agent which reduces the surface tension of the coating as layer after drying, an additionally good moisture resistance is obtained. Moreover, this will usually involve an increase of the smoothness of the coating, in particular when silicone oil or the like is used.

Replace the paragraph on page 7 beginning at line 24 with the following amended paragraph:

The invention further relates to the use of a release agent, characterized by the features of claim 38. The use of a release agent in a product prepared from a mass involves the release agent expressing from the mass. A substantially constant layer of release agent is obtained and maintained during the preparation of successive products. The invention further relates to a product manufactured by a method according to the present invention. In addition, the invention relates to a coating, in particular suitable for use in a method according to the invention, in

particular characterized by the features according to any one of claims 44 - 45, and to a mass for manufacturing base products suitable for use in a method according to the present invention. In these embodiments, the coating comprises a surface tension reducing agent comprising from 25 -50%, by volume with an preferred value at 40% of the volume.

Insert the following heading on page 8, before line 1:

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

Insert the following heading on page 9, after line 6:

DETAILED DESCRIPTION OF THE INVENTION

Replace the paragraph beginning at line 10 on page 4 with the following amended paragraph:

Preferably, in methods according to the present invention, products are manufactured, at least base products are used, having a moisture content of less than 3 weight percents. Thus, stable, form-retaining base products are obtained that can readily be coated. Next, preferably by means of the coating, moisture is introduced into the product, while the amount of moisture fed can be regulated particularly effectively. Accordingly, the properties of the coated products can be regulated in a particularly good and simple manner. It is also considered advantageous to

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incorporate crosslinkers
in the first and second coatings. Suitable
compounds for this purpose may be selected from
among zirconium acetate, urea formaldehyde,
melamine formaldehyde, glyoxal, ammonium zirconium
carbonate, polyamideamine-epichlorhydrin,
epoxides, trimetaphosphate, derivatives thereof or
combinations of the foregoing.

Replace the paragraph beginning at line 16 on page 7 with the following paragraph:

The use of such coating containing an agent which influences the product properties offers the advantage that thus, said agent can be introduced into a base product part simultaneously with the application of the coating. Thus, for example, at least one coating may be applied which is relatively dense with respect to the agent influencing the properties of the base product.